



# GOLDEN CROSS RESOURCES LTD

ABN 65 063 075 178

## QUARTERLY REPORT DECEMBER 2010

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31 January 2011

### HIGHLIGHTS

#### Copper Hill

- Resource increase of 30% at Copper Hill
- 173 million tonnes grading 0.31% copper and 0.26 g/t gold
- Containing 535,000 tonnes copper and 1.47 million ounces of gold
- High copper and gold prices support robust economics at Copper Hill
- Copper Hill Feasibility Study Stage 1 completed
- Stage 2 underway with Whittle Consulting
- Exploration drilling continuing to test extensions to north and south
- Metallurgical drilling completed, samples despatched to Metcon Laboratories
- Oxide zone to be drill tested to define gold distribution; potential for additional gold
- Metallurgical, Geotechnical and Engineering Consultants in place

#### Other Projects

- Mulga Tank soil sampling program provides drill targets
- Cargo program to test new gold lodes. Drilling rig on order
- Joint Venture progress:
  - Steady progress by MMG at Wagga Tank and Gilgunnia Range near Cobar
  - Paradigm Metals announces results of drilling at Yellow Mountain
  - Silver City Minerals Limited and Endeavour Minerals Pty Ltd sign separate farm in agreements at Broken Hill
- Comarca elections begin in Panama
- Additional coal permits applied for in Queensland

## Activities

### Copper Hill Resource Increased

#### 535,000 tonnes of copper and 1.4 million ounces of gold

contained within

#### 173 million tonnes at 0.31 percent copper and 0.26 grams per tonne gold

Resource consultant Hellman & Schofield (H&S) completed a new resource estimate for the Copper Hill porphyry copper-gold project near Molong, NSW. The tonnage has increased by 30%, adding an extra 40 million tonnes of copper-gold resources.

The estimate was generated using historical and recent drill results for holes up to GCHR311 in the current, on-going, drilling program. The block model boundaries were increased to include an additional 16 drill holes for 3,018 metres bringing the totals to 534 holes and 69,643m of drilling.

The revised resource estimate is set out below, showing several cut-off grades.

| Copper Cut-off (%) | Tonnes (Mt) | Copper (%)   | Gold (g/t)   | Contained Copper (Kt) | Contained Gold (M oz) |
|--------------------|-------------|--------------|--------------|-----------------------|-----------------------|
| 0.10               | 505         | 0.199        | 0.174        | 1,006                 | 2.83                  |
| <b>0.20</b>        | <b>173</b>  | <b>0.310</b> | <b>0.264</b> | <b>535</b>            | <b>1.47</b>           |
| 0.30               | 66          | 0.423        | 0.367        | 281                   | 0.78                  |

The resource is classified as:

| Class            | Tonnes (Mt) | Copper (%)   | Gold (g/t)   | Contained Copper (Kt) | Contained Gold (M oz) | % of Tonnes |
|------------------|-------------|--------------|--------------|-----------------------|-----------------------|-------------|
| <b>Measured</b>  | 75          | 0.342        | 0.324        | 258                   | 0.79                  | 43          |
| <b>Indicated</b> | 64          | 0.292        | 0.227        | 186                   | 0.46                  | 37          |
| <b>Inferred</b>  | 34          | 0.273        | 0.200        | 91                    | 0.22                  | 20          |
| <b>Total</b>     | <b>173</b>  | <b>0.310</b> | <b>0.264</b> | <b>535</b>            | <b>1.47</b>           | <b>100</b>  |

*Note: The Measured, Indicated and Inferred Resource Estimates are reported under the 2004 JORC Code and Guidelines. Search parameters for the categories are as follows: Measured = 40m x 45m x 40m (min 12 data points);*

*Indicated = 60m x 65m x 60m (min 10 data points); Inferred = 100m x 110m x 100 (min 6 data points)*

Approximately 43% of the resource at a 0.2% copper cut-off grade is now classified as Measured, 37% as Indicated, and 20% Inferred. Primary mineralisation comprises 96% of the resource (tonnage) with 2% supergene/transition and 2% oxide copper, as shown below:

| Zone         | Tonnes (Mt) | Copper (%)   | Gold (g/t)   | Contained Copper (Kt) | Contained Gold (M oz) | % of Tonnes |
|--------------|-------------|--------------|--------------|-----------------------|-----------------------|-------------|
| Primary      | 166         | 0.309        | 0.265        | 512                   | 1.41                  | 96          |
| Transition   | 3           | 0.351        | 0.267        | 12                    | 0.03                  | 2           |
| Oxide        | 4           | 0.296        | 0.243        | 11                    | 0.03                  | 2           |
| <b>Total</b> | <b>173</b>  | <b>0.310</b> | <b>0.264</b> | <b>535</b>            | <b>1.47</b>           | <b>100</b>  |

The resource estimates were performed using ordinary kriging, constrained above and below the base of oxidation and either side of the Western Fault, but otherwise unconstrained. The different mineralisation types and the orientation of the primary mineralisation domains were determined from GCR's geological interpretation.

Block densities were modelled using the results from 525 samples taken of drill core from GCHR046 and above. Densities were determined by classical methods on site with check measurements, comprising approximately 10% of the bulk density samples, conducted at Australian Laboratory Services (ALS) in Orange, NSW.

*Note: GCR provided the drill hole database, which H&S has accepted in good faith as being reliable, accurate and complete. GCR also supplied a detailed geological interpretation of the Copper Hill deposit, which formed the framework for the resource estimates. H&S has not validated the GCR database or geological interpretation in any detail, so responsibility for these aspects of the resource estimates, including the quality of the data, resides with GCR.*

*For Golden Cross drill holes drilled since and including GCHR080, two metre samples for assay from Reverse Circulation Percussion (RCP) holes were obtained using either a riffle splitter or a Metzke cone splitter. GCHR prefixed RCP drill holes previous to that were sampled using a spear. All GCO cored holes were sampled using half drill core on two metre intervals for NQ core and one metre intervals for HQ core. Analyses were undertaken at ALS Orange using 50g Fire Assay (Method AA26) for gold and ICP41 for copper and a suite of other elements. Standards and blanks were inserted into the sample stream at regular intervals, nominally on a 25 metre cycle. Duplicate samples were submitted every 20 samples for RCP holes only.*

\* \* \* \* \*

## **GCHR314 CONFIRMS and EXTENDS ECONOMIC GRADES AT COPPER HILL NORTH**

During the Quarter, 1,943.7 m of drilling, consisting of a mix of PQ and HQ coring, was completed in 8 holes (GCHR312-319). Five holes were drilled to provide metallurgical samples and 3 tested peripheral exploration targets.

Very encouraging assay results from GCHR314 at Buckley's Hill were received during the quarter. At a 0.2% copper cut-off the hole intersected:-

- **5 metres @ 0.47% Cu, 0.21 g/t Au from 77m metres**
- **63 metres @ 0.48% Cu, 0.23 g/t Au from 98 metres and**
- **66 metres @ 0.61% Cu, 0.36 g/t Au from 186 metres**

Peak values for copper in each of the intervals above are 1.19%, 1.46% and 1.72% respectively. The two broad intercepts occur within a 154 metre long mineralised zone which is cut by a 24 metre-wide barren dyke. Metre intervals quoted are down-hole and approximate true thickness based on current geological interpretations. Gold assays correlate well with the copper zones (Figure 1).

GCHR314 was drilled to test up-dip extensions of the deeper intercept in GCHR298 (previously announced on 5 July 2010 with **132 metres @ 0.4% copper and 0.26 grams per tonne gold** within a **283 metre interval of 0.23% copper and 0.27 grams per tonne gold**). Resource blocks created by these new intersections are likely to support the mining of the deeper mineralisation defined by GCHR298 in the next round of pit optimisations.

The Buckleys Hill mineralisation is now shaping to be a substantial and higher grade occurrence with extensions of over 300 metres north from GCHR190 with its bulk intersection, including dilution, of **486 metres at 0.33% copper** at the south end of Buckley's Hill and 500 metres north of Copper Hill itself (Figures 2 & 3).

Geological evaluation of data from GCHR314 supports an interpreted northerly plunge to the wide zones of economic grade mineralisation which have yet to be tested below 400 metres RL (120m below surface). Further down-dip and down-plunge extensions were tested by on-going drilling in December with results pending.

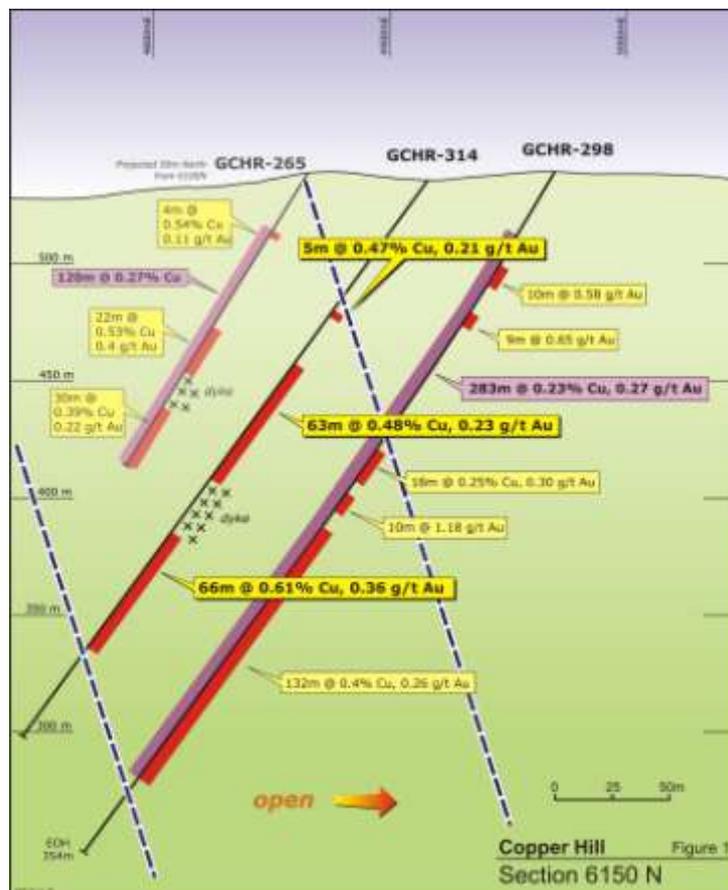


Figure 1: Buckley's Hill drilling adds more to the Resource

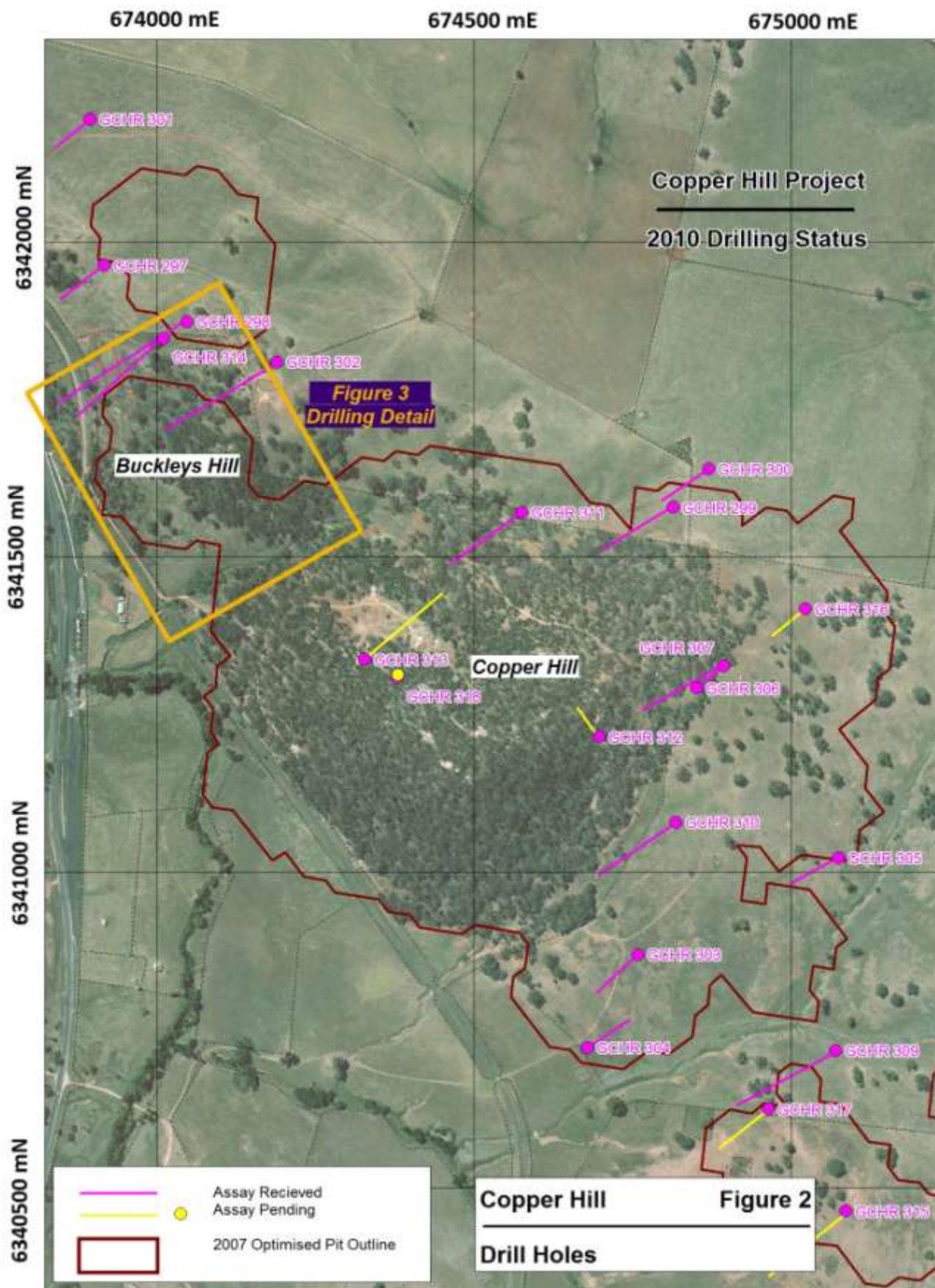


Figure 2: 2010 drill hole locations and optimised Open Pit outlines

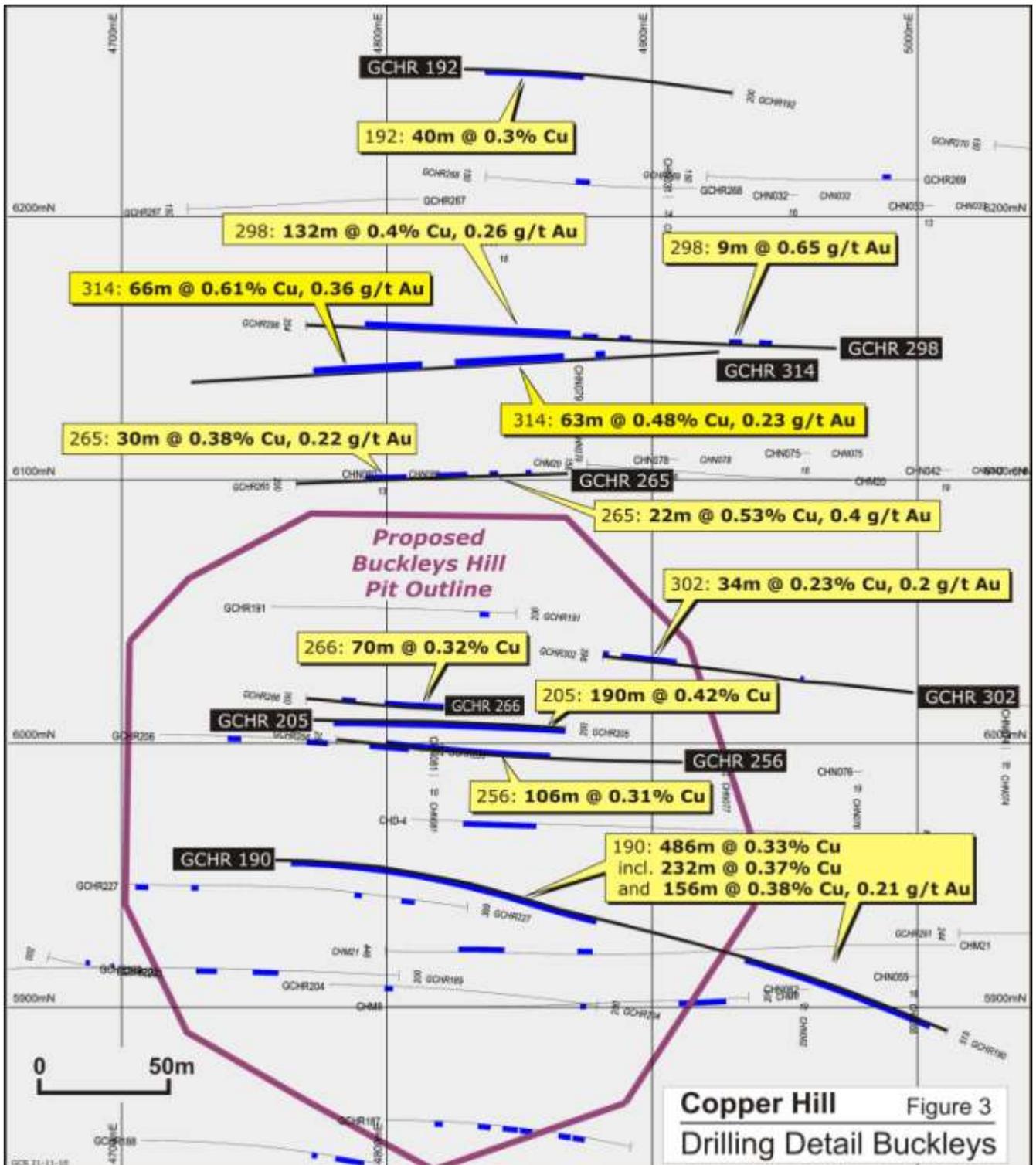


Figure 3: Buckley's Hill drill hole locations and approximate Open Pit outline



**Figure 4: Copper Hill GCHR-314 in progress. See Figures 1, 2, & 3.**

**This hole intercepted up dip extensions of mineralisation identified in GCHR298  
Buckley's Hill is located to the left (to southeast) of the photograph.**

## **Copper Hill - Production of a Copper-Gold Sulphide**

### **Concentrate for Direct Sale is now the Preferred Option**

- **Earlier Start-up**
- **Lower capital costs**
- **China-sourced equipment and technology**
- **Faster track to Production and Cash Flow**

A GCR management team from GCR travelled to China in December. Meetings were held with consultants CACS and NERIN to discuss progress on the Feasibility Study. In addition, visits were made to several major ore processing equipment manufacturers followed by tours of mines and a smelter where this equipment was installed and operating. The team was encouraged by the demonstrable quality and reliability of the equipment.

Introductory meetings were also held with several Chinese banks. GCR was advised that Chinese bank policy is to encourage financing of bankable projects using processing equipment imported from China.

NERIN has completed a comprehensive assessment of capital cost items for the Copper Hill project. Cost savings of 30% to 40% will be realised by sourcing much of the crushing-grinding-flotation-filter equipment from China.

The assessment by NERIN, formally delivered in January 2011, indicated that the 'standard' route of producing a copper-gold concentrate for sale to smelters is a 'preferred' option and the roaster-acid plant-SXEW-CIL complex, planned for Port Pirie, will now be shelved, but be subject to further study. There are a number of benefits for the concentrate option:

- Construction time will be greatly reduced
- The capital cost will be much lower and more 'bankable'
- Standard equipment should be deliverable within the project timelines
- Cash flow will be achieved sooner
- Gold in pyrite tails may be recovered at Copper Hill using standard CIL technology

Metallurgical considerations are always important but for Copper Hill are now critical as GCR examines ways to maximise extraction of the additional gold held in the pyritic tails – the reason the roaster option was under consideration in the first place. A 5-hole drilling program, specifically designed to produce core samples for more metallurgical test-work, has just been completed. Samples were sent to Metcon in Sydney for testing in December, in conjunction with the remainder of the material from the initial test-work. Consideration is being given to shipping 300kg of representative core to China for additional testing and proposals, from two major Chinese laboratories, are being reviewed.

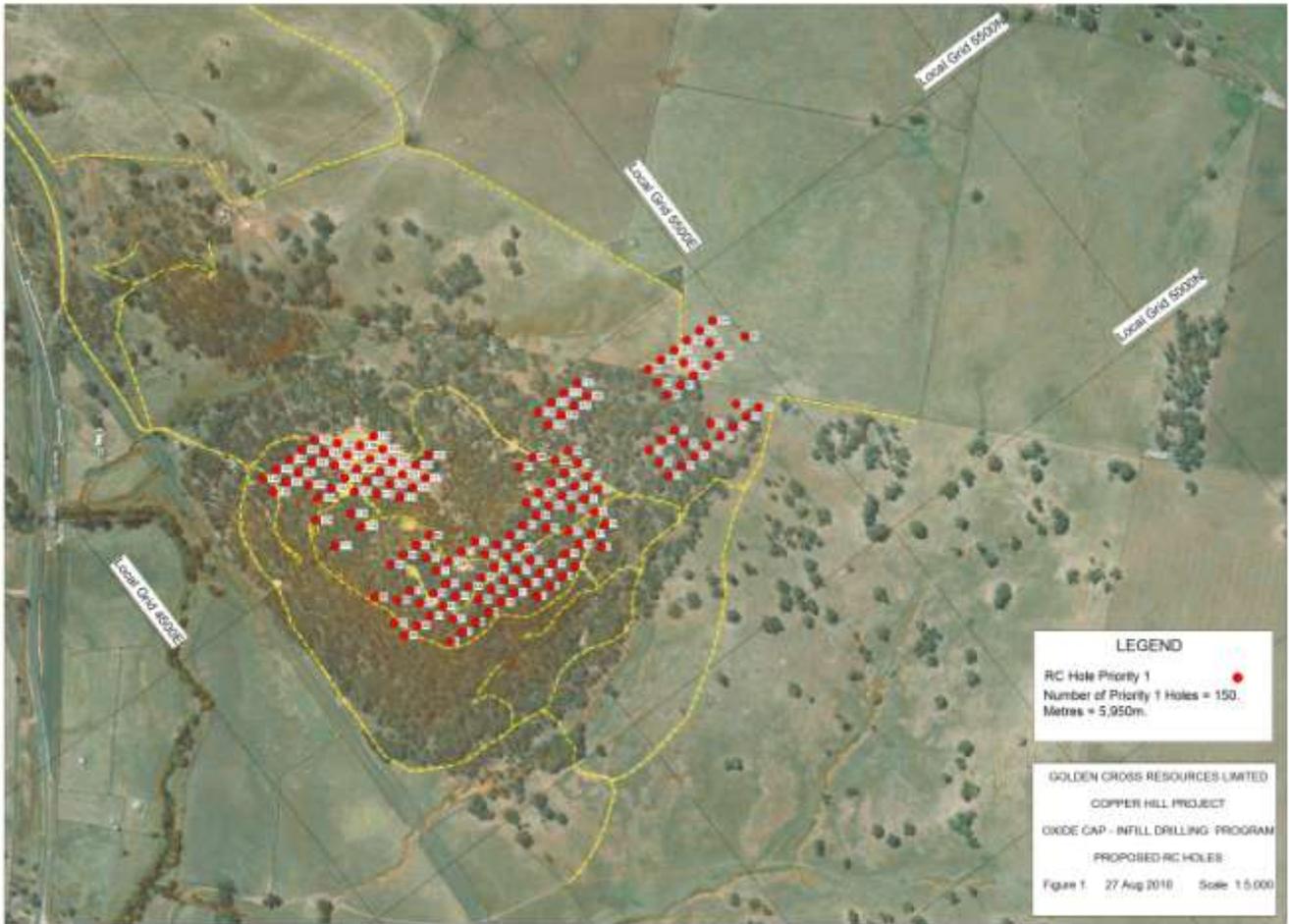
## **COPPER HILL – FUTURE ACTIVITIES**

Golden Cross' primary focus is to progress its 100%-owned Copper Hill project to production. A Feasibility Study is underway and due for completion in early 2012.

### **Copper Hill Oxide Drilling**

Exploration and infill drilling (Figure 5) is continuing at Copper Hill to test the oxide gold zones. Gold values of +0.4g/t gold not falling within the >0.2% copper cut-off are not included in the current JORC Resource. There is potential for easily accessible gold-only resources to be defined at shallow depths. Mining and processing this material could provide early cash flow for the project at low capital cost.

An RC drilling program has commenced in January 2011 to define the oxide gold resource and collect samples for metallurgical test work.



**Figure 5: Oxide gold drill first-pass program collar locations**

GCR's focus now is to refine the process to produce a sulphide concentrate grading +25% copper with +15g/t gold on site at Copper Hill for sale directly to an overseas smelter. Testwork has already achieved this outcome. While substantially reducing up-front capital costs, this option might, on the basis of early metallurgical results, result in lower copper and gold recoveries overall.

Metallurgical studies will continue on the sulphide mineralisation in the quest to improve copper and gold recoveries and determine the optimum treatment strategy.

The consulting agreement with CACS for Stage 1 of the Feasibility Study concluded in December 2010. GCR is now embarking on Stage 2 of the Feasibility Study and, following meetings in late-December, has appointed Whittle Consulting to create an enterprise optimisation model for Copper Hill by late March 2011. Preliminary results are expected in early March.

Whittle Consulting is a leading global mining consultant that specialises in the modelling, analysis and optimisation of complex mining and mineral processing operations. The application of Whittle's Enterprise Optimisation software to the Copper Hill deposit will assist the advancement of the Feasibility Study.

Environmental monitoring will also continue over a 12 – 18 month period during which Golden Cross will comply with all State Government planning requirements.

Investors are reminded of Copper Hills’ excellent location, the close proximity to road, rail and power infrastructure and the generous ongoing local support of the people of Molong.

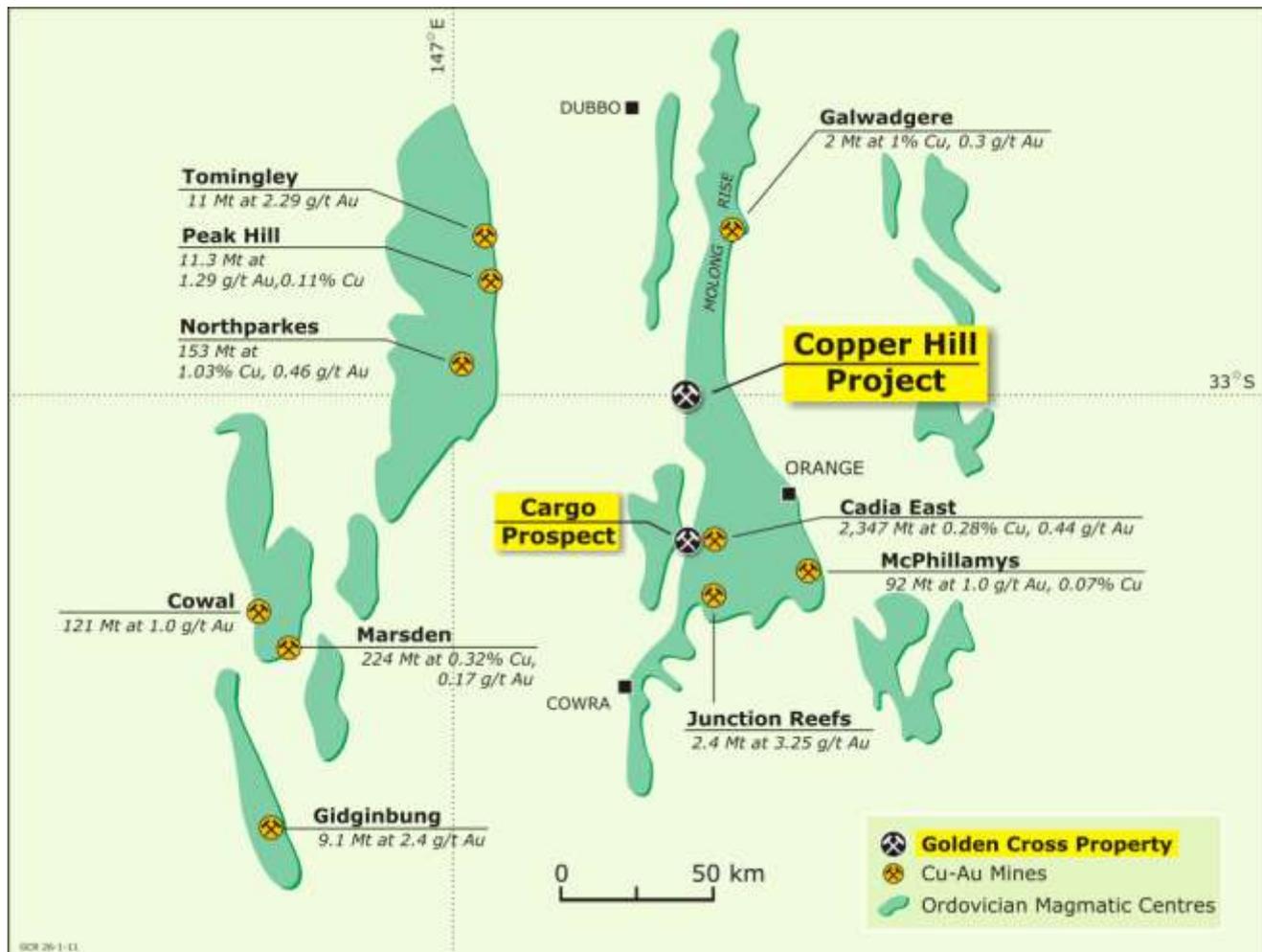


Figure 6: Copper Hill location map showing other mines and prospects in the region

## Canbelego and Rast, Lachlan Fold Belt NSW

Golden Cross maintains an active presence in the promising Cobar-Nymagee region through farm outs and wholly owned tenement packages (Figure 7).

Following the success of the ionic leach technique for analysis of soils in our Mulga Tank projects in Western Australia in similar deeply weathered terrain and transported cover, a Golden Cross field crew commenced trial sampling over selected parts of the Canbelego and Rast licences.

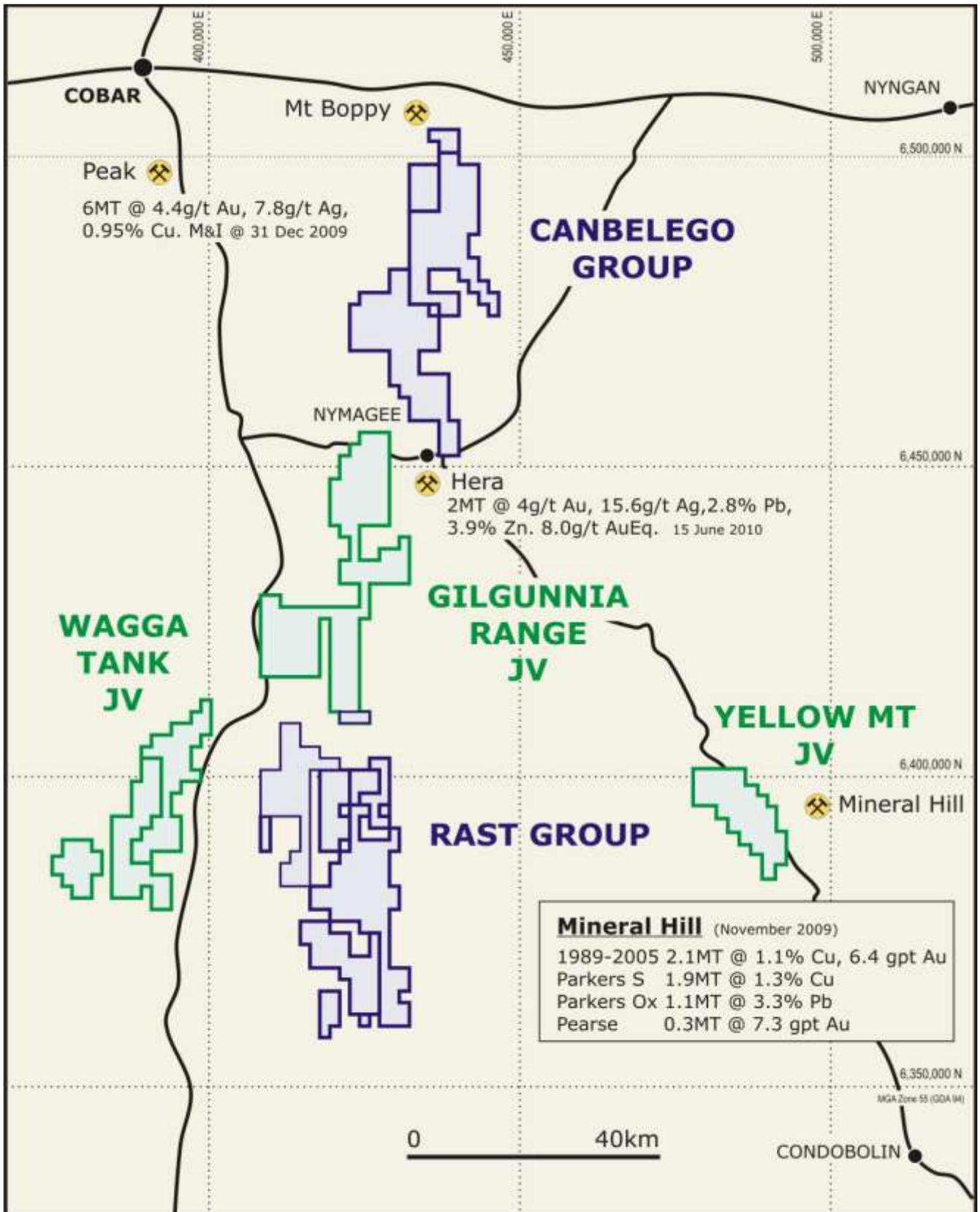


Figure 7: Cobar-Nymagee Region Projects

## **Yellow Mountain Joint Venture, Lachlan Fold Belt NSW (Paradigm Metals Ltd earning 51%)**

During the Quarter, the Yellow Mountain Joint Venture (Figure 7) was restructured to admit Paradigm Metals under an option agreement whereby Paradigm undertook preliminary drilling.

Paradigm has reported results from December 2010 air core drilling at Quarry Hill prospect at Yellow Mountain. An extensive, near-surface, oxide gold horizon has been confirmed at Quarry Hill covering an area of 500m by 100m which is open along strike and down-dip. Several other parallel gold horizons have also been identified and further drilling is planned.

Higher grade drill intercepts include:

| <b>Hole</b> | <b>Intercept</b> | <b>Gold g/t</b> | <b>From</b> |
|-------------|------------------|-----------------|-------------|
| PQH028      | 22.0m            | 0.64            | surface     |
| PQH029      | 36.5m            | 0.50            | surface     |
| PQH030      | 10.0m            | 0.64            | 26m         |
| PQH044      | 41.0m            | 0.50            | surface     |

Paradigm has thus exercised its option to incur further expenditure to earn up to a 51% interest in EL6325, at which time Golden Cross will have a 30% interest and Triako Resources a 19% interest.

## **Gawler Craton, South Australia**

Three exploration licences east of Coober Pedy, have been granted over co-incident gravity/magnetic targets in the northern Gawler Craton. Ground geophysical surveys are planned to clarify the anomalies and extend the data coverage at sufficient density to define drill targets.

A request for access to the Woomera Prohibited Area to facilitate further exploration has been approved and the long-planned gravity survey will commence in the March quarter, 2011. A fourth application, Giddinna Creek has been offered for grant by PIRSA.

## **Mulga Tank, East Yilgarn WA.**

The Mulga Tank project area contains soil anomalies derived from ionic leach processing of samples. Subsequent air core drilling of the anomalies in mid-2010 returned a best result of 12 metres grading 51 ppb gold. The success of the ionic technique in defining coherent surface anomalies in areas of deep regolith supported by follow-up drilling is encouraging. Additional soil sampling was undertaken during the December Quarter to provide in-fill data and test for extensions of the anomalies into new areas.

The first results received correspond well with the tenor and location of the 2008 anomalies verified by air core drilling. The in-fill data confirm and extend existing zones of soil gold defined by 0.5ppb and 1ppb gold. Further evaluation in conjunction with other elements and synthesis with geophysical and geological data is underway.

## Panama

The Republic of Panama forms part of the copper-gold-silver super-province of the Western Americas, extending from Tierra del Fuego in the south to Alaska in the north. Panama hosts several large porphyry copper deposits including Cobre Panama (+2 billion tonnes @ 0.5% copper) owned by Inmet Mining, and Cerro Colorado (+1.7 billion tonnes @ 0.64% copper), currently owned by the Panamanian Government.

GCR has applications for six large tenements over prospective terrain between these two giant deposits. Discussions with indigenous landowner groups are continuing.



Figure 8: Panama – GCRP's EL Applications showing major mines and deposits

## Mt Isa Phosphate Joint Venture, QLD Legend International earning 80% in Phosphate only

Through its ownership of phosphate deposits at Highlands Plains East, Sherrin & Lily Creek and Quita Creek, Golden Cross controls approximately 38% of the phosphate resource being evaluated by Legend International.

## Broken Hill Joint Venture, NSW Silver City Minerals Limited earning 51%, then 80%

On 8 October 2010, Golden Cross and Silver City Minerals Limited signed a heads of agreement by which Silver City can earn a 51% interest in gold, silver and base metals (but excluding nickel-platinum group metals) in the Broken Hill tenement (EL7390) by spending \$600,000 by 8 October 2015. Silver City can earn an additional 29% to a total of 80% by

spending another \$400,000 on exploration and development activities in the subsequent two years to 8 October 2017.

## Broken Hill Joint Venture, NSW (Endeavour Minerals Limited earning 51%, then 80%)

On 2 November 2010, Golden Cross and Endeavour Minerals Limited signed a heads of agreement by which Endeavour Minerals can earn a 51% interest in nickel and platinum group elements and minerals (PGE's), (but excluding gold, silver and base metals not occurring in mafic-ultramafic complexes) in the Broken Hill tenement (EL7390) by spending \$400,000 by 2 November 2015. Endeavour Minerals can earn an additional 29% to a total of 80% by spending another \$200,000 on exploration and development activities in the subsequent two years to 2 November 2017.

## Further Coal Permit Applications, QLD

GCR continues to expand its coal portfolio. Discussions are ongoing with interested parties whilst GCR awaits the outcome of its competitive applications for coal in Queensland.

## Clarence Moreton-Surat Basin

GCR continues to evaluate opportunities to expand its coal portfolio, and in the December quarter lodged applications for 4 new areas in the Clarence Moreton-Surat Basin as shown in Figure 9 below and Table 1.

**Table 1: GCR 100% owned coal permits and applications.**

| No. | PROJECT          | EPC/A             | Sub Blocks | Area (km <sup>2</sup> ) | PERMIT STATUS                               | LODGED     | GRANTED  |
|-----|------------------|-------------------|------------|-------------------------|---|------------|----------|
| 1   | Chinchilla South | 1655              | 3          | 9.19                    | Granted permit                              | 1/12/2008  | 17/08/09 |
| 2   | Warwick          | 1643              | 45         | 136.40                  | Granted permit                              | 3/11/2008  | 15/10/09 |
| 3   | Dalby            | 1658              | 6          | 18.35                   | Granted permit                              | 1/12/2008  | 15/10/09 |
| 4   | Chinchilla North | 1659              | 5          | 15.30                   | Granted permit                              | 1/12/2008  | 26/03/10 |
| 5   | Warwick Extended | 1656              | 139        | 421.10                  | <a href="#">Competing application</a>       | 1/12/2008  |          |
| 6   | Pentland         | 1642              | 60         | 192.80                  | <a href="#">Competing application</a>       | 3/11/2008  |          |
| 7   | Warwick North    | 2068              | 17         | 51.47                   | <a href="#">Competing application</a>       | 1/03/2010  |          |
| 8   | Boonah           | 2082              | 13         | 39.43                   | New permit application                      | 16/03/2010 |          |
| 9   | Brigalow         | 2243              | 2          | 6.13                    | New permit application                      | 27/10/2010 |          |
| 10  | Boonah East      | 2242              | 6          | 18.20                   | New permit application                      | 27/10/2010 |          |
| 11  | Roadvale         | 2258              | 7          | 21.24                   | <a href="#">New Competitive application</a> | 1/11/2010  |          |
| 12  | Boonah North     | 2257              | 17         | 51.60                   | <a href="#">New Competitive application</a> | 1/11/2010  |          |
| 13  | Pentland East    | 2252              | 37         | 118.80                  | <a href="#">New Competitive application</a> | 1/11/2010  |          |
|     |                  | <b>Sub blocks</b> | <b>357</b> | <b>1,100.01</b>         |   |            |          |

## Pentland, Galilee Basin QLD

GCR has two competitive applications in the Galilee Basin, EPCA1642 Pentland and EPCA2252 Pentland East as shown in figure 10. These surround both Xstrata's Pentland and Linc Energy's Pentland West Coal Deposits as shown in Figure 11.

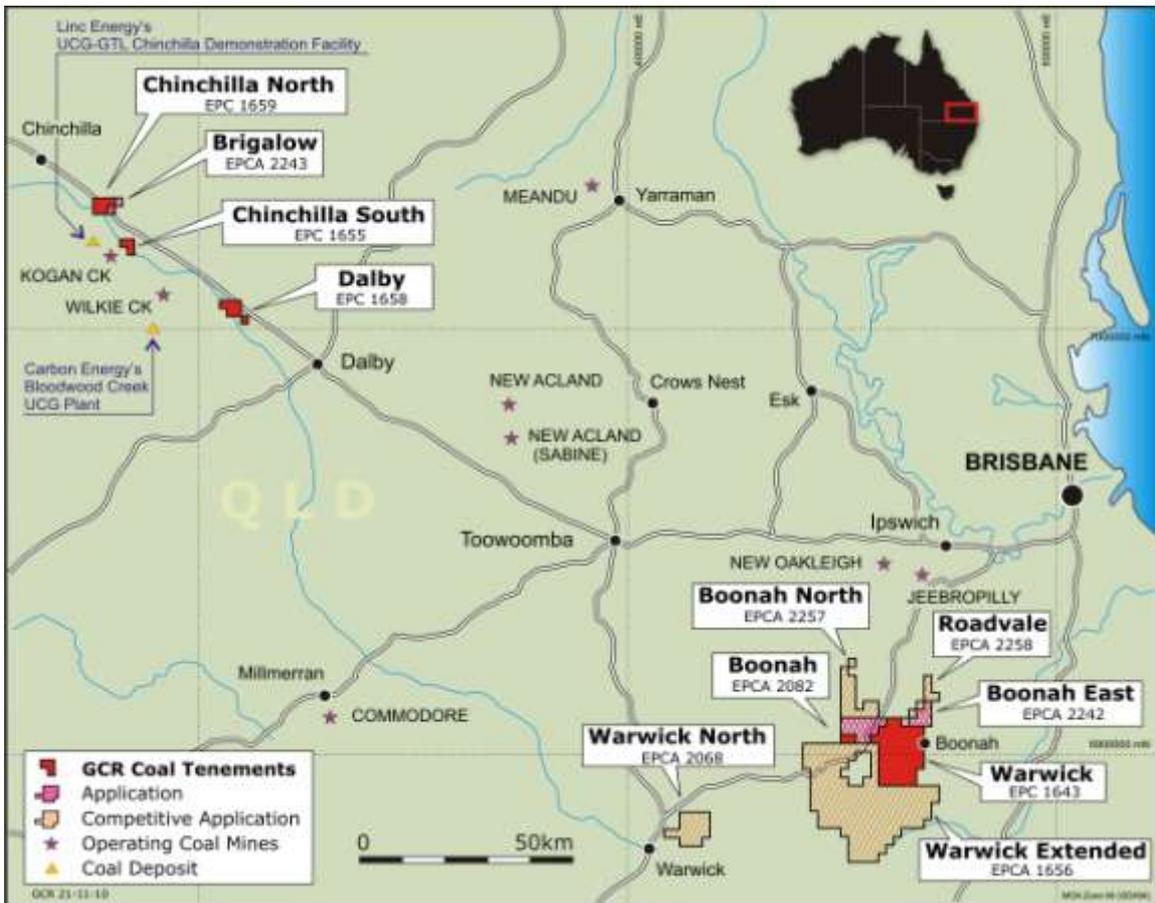


Figure 9: GCR's Permits and Applications in the Clarence-Moreton-Surat Basin



Figure 10: GCR's Pentland Competitive Applications



## About Golden Cross Resources

Golden Cross is a multi-commodity global explorer, which has formed a strategic alliance with CUMIC subsidiary HQ Mining Resources Holding Limited providing access to mining consultants, capital and mining and processing equipment from China. Golden Cross is continuing to progress its 100%-owned copper-gold Copper Hill Project. Large, prospective areas are under application for copper and gold in Panama and coal in Queensland. Golden Cross holds substantial phosphate resources in Queensland. Golden Cross, backed by CUMIC, is seeking new mineral exploration and development opportunities focusing on copper and gold in Australia, the Americas and southern Africa.

## About China United Mining Investment Corporation (CUMIC)

CUMIC is a privately owned, Beijing-based investment company specialising in mineral and mining investment. CUMIC has a portfolio of exploration and mining assets in various parts of the world, focusing on iron, copper and gold. CUMIC developed and controls the Mongolia Eleet River Iron and Steel Company, a major iron ore mining company.

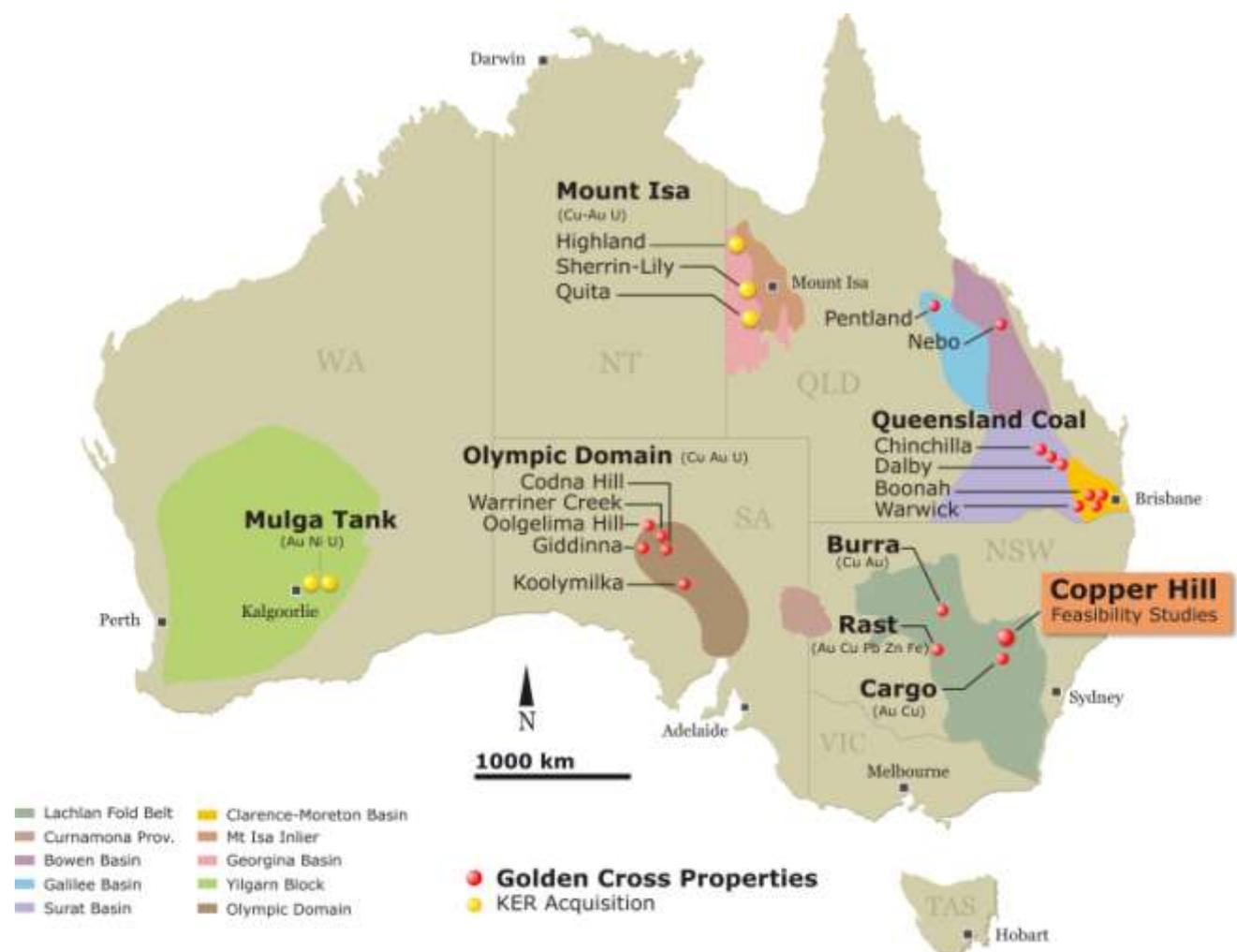
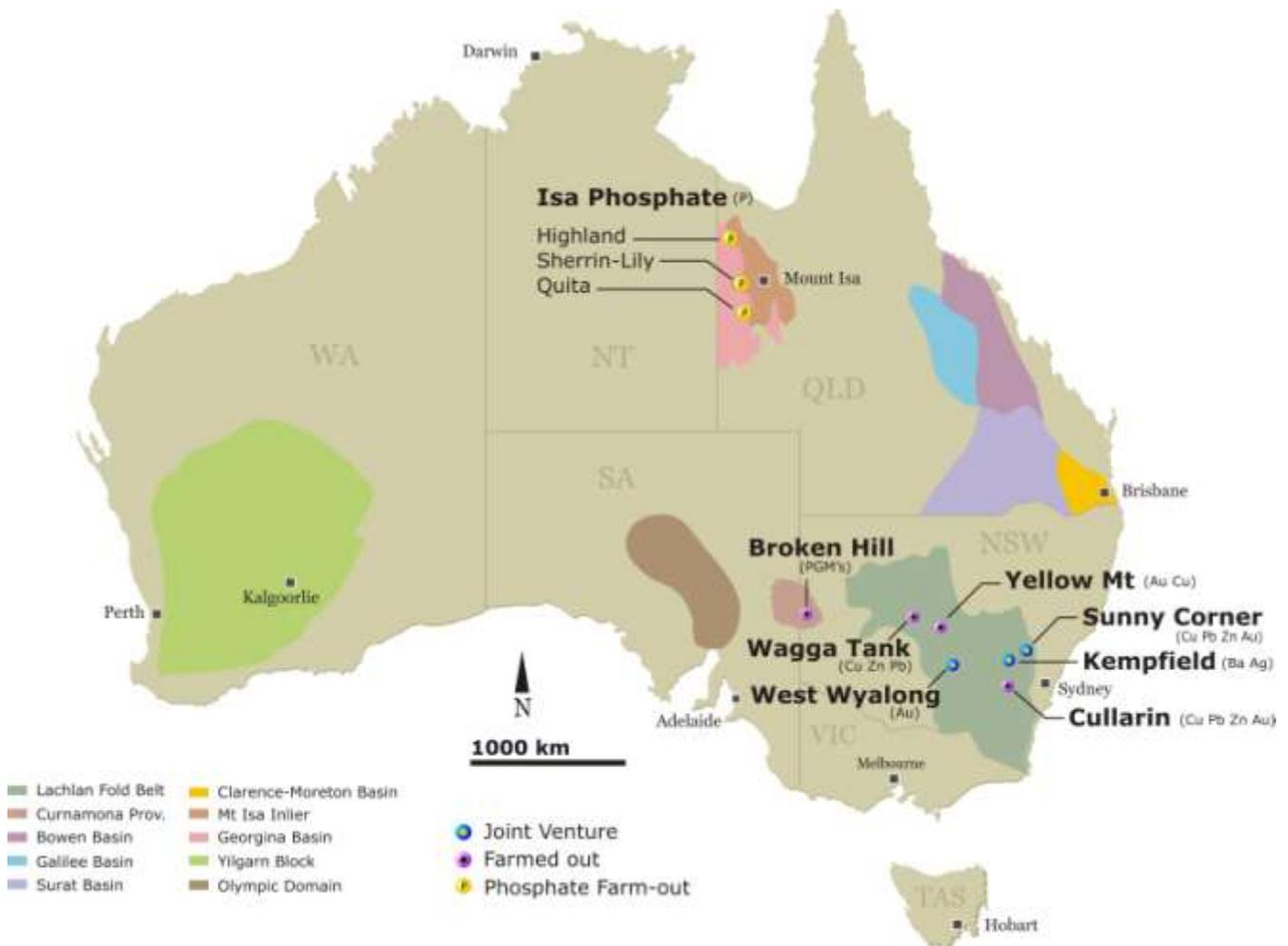


Figure 12: GCR 100% owned projects



**Figure 13: GCR Joint Venture Projects (Farm-outs)**

### **Compliance Statements**

*The Resource Estimates were calculated by Dr Phillip Hellman, a full-time employee of Hellman & Schofield, Consulting Geologists and specialists in resource estimation and geostatistics. Dr Hellman is a Fellow of the Australian Institute of Geoscientists (AIG), has more than five years experience in the field of activity in which he is reporting and consents to his report being incorporated into this announcement in the context in which it appears above.*

*Samples for assay were obtained from half sawn PQ and HQ drill core. Analyses were undertaken at ALS Orange using 50g Fire Assay (Method AA26) for gold and ICP41 for copper and a suite of other elements. Standards and blanks were inserted into the sample stream at regular intervals.*

*Drill intercepts have been calculated using a 0.2% copper cut-off with maximum internal dilution of 3 metres.*

*Golden Cross Resources is responsible for the resource database data quality and geological interpretation, which were compiled under the direction of Kim Stanton-Cook, Managing Director. Mr Stanton-Cook is a full time employee of Golden Cross Resources Ltd, a Member of the AIG and has more than five years' experience in the field of activity in which he is reporting.*

*The information in this report that relates to Exploration Results is based on information compiled by Kim Stanton-Cook, who is a member of the Australian Institute of Geoscientists, is a full-time employee of Golden Cross, and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Kim consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

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## **Corporate Directory**

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### **Board of Directors**

|                  |                                       |
|------------------|---------------------------------------|
| Chris Torrey     | Chairman                              |
| Kim Stanton-Cook | Managing Director                     |
| Li Xiaoming      | Non Executive Director                |
| Suzanne Qiu      | Non Executive Director                |
| Jingmin Qian     | Non Executive Director                |
| David Timms      | Non Executive Director                |
| Li Yan           | Alternate Director for Mr Li          |
| Daven Timms      | Alternate Director for Mr David Timms |

### **Company Secretary**

Simon Lennon

### **Issued Share Capital**

Golden Cross Resources Ltd has 1,361 million ordinary shares (ASX:GCR) on issue and 453.7 million 4 cent share options exercisable by March 31 2011 (ASX:GCRO) listed on the ASX.

### **Registered Office**

Golden Cross Resources Ltd  
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Australia  
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[www.goldencross.com.au](http://www.goldencross.com.au)

*Please direct shareholding enquiries to the Share Registry:*

*Registries Limited*

*Level 7, 202 Kent Street*

*Sydney NSW 2000*

*Phone: (61 2) 9290 9600*